Notice of Allowability	Application No.	Applicant(s)	
	09/942,459	HOULE, ALAIN	
	Examiner	Art Unit	
	Delma R. Flores Ruiz	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *4/23/2004*.

2. ☒ The allowed claim(s) is/are *1, 3, 4, 6 – 9, 11,12, 14 – 15, 17 – 20, 22, 23, 25 – 26, 28 – 31 and 33*.

3. ☒ The drawings filed on *29 August 2001* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance: claim 1 has been allowed because the available prior art fail to teach a method for controlling an output frequency of a laser structure including the specific structure limitation of a *measuring response of said optical component having said frequency-selective response characteristic to said optical energy from said laser output using exactly one photodetector; and controlling said laser output frequency based on said measured response by generating an error signal based on a difference between a measured laser output frequency and a desired laser output frequency and generating a control signal for said laser output frequency based on a sum of said error signal and a dithering signal; and if said measured response indicates said laser output frequency is outside a tracking range, sweeping e said control signal until said laser output frequency is within said tracking range* in combination with the remaining limitations that comprises the claimed method for controlling an output frequency of a laser are neither disclosed nor suggested in any piece of available prior art, and therefore are neither anticipated nor obvious over the prior art of record.

The following is an examiner's statement of reasons for allowance: claim 6 has been allowed because the available prior art fail to teach a method for controlling an output frequency of a laser structure including the specific structure limitation of a *passing optical energy from an output of said laser to an optical component having a frequency-selective response characteristic; measuring response of said optical component having said frequency selective response characteristic to said optical energy from said laser output; generating a dithering signal to dither said output frequency of said laser; and controlling said laser output frequency based on said measured response as influenced by said dithering signal; and if said measured response indicates said laser output frequency is outside a tracking range, sweeping a control signal until said laser output frequency is within said tracking range* in combination with the remaining limitations that comprises the claimed method for controlling an output frequency of a laser are neither disclosed nor suggested in any piece of available prior art, and therefore are neither anticipated nor obvious over the prior art of record.

The following is an examiner's statement of reasons for allowance: claim 12has been allowed because the available prior art fail to teach a apparatus for controlling an output frequency of a laser structure including the specific structure limitation of *an optical component having a frequency-selective response characteristic, said optical component receiving optical energy from said laser; exactly one photodetector that*

measures response of said optical component having said frequency selective response characteristic to said optical energy from said laser output; a control block that controls said laser output frequency based on said measured response, wherein said control block comprises: an error signal generator that generates an error signal based on a difference between a measured laser output frequency and a desired laser output frequency; and a control signal generator that generates a control signal for said laser output frequency based on said error signal and a dithering signal; and a sweep generator that, if said measured response indicates said laser output frequency is outside a tracking range, sweeps said control signal until said laser output frequency is within a tracking range in combination with the remaining limitations that comprises the claimed apparatus for controlling an output frequency of a laser are neither disclosed nor suggested in any piece of available prior art, and therefore are neither anticipated nor obvious over the prior art of record.

The following is an examiner's statement of reasons for allowance: claim 17 has been allowed because the available prior art fail to teach a apparatus for controlling an output frequency of a laser structure including the specific structure limitation of *an optical component having a frequency selective response characteristic that receives optical energy from said laser; a photodetector that measures response of said optical component having said frequency-selective response characteristic to said optical energy from said laser; a dithering signal generator that dithers said output frequency of*

said laser; and a control block that controls said laser output frequency based on said measured response as influenced by said dithering signal; and a sweep generator that, if said measured response indicates said laser output frequency is outside a tracking range, sweeps a control signal until said laser output frequency is within said tracking range in combination with the remaining limitations that comprises the claimed apparatus for controlling an output frequency of a laser are neither disclosed nor suggested in any piece of available prior art, and therefore are neither anticipated nor obvious over the prior art of record.

The following is an examiner's statement of reasons for allowance: claim 23has been allowed because the available prior art fail to teach apparatus for controlling an output frequency of a laser structure including the specific structure limitation of a *means for passing optical energy from an output of said laser to an optical component having a frequency selective response characteristic; means for measuring response of said optical component having said frequency-selective response characteristic to said optical energy from said laser output using exactly one photodetector; means for controlling said laser output frequency based on said measured response by generating an error signal based on a difference between a measured laser output frequency and a desired laser output frequency generating a control signal for said laser output frequency based on a sum of said error signal and a dithering signal; and means for, if*

said measured response indicates said laser output frequency is outside a tracking range, sweeping said control signal until said laser output frequency is within said tracking range in combination with the remaining limitations that comprises the claimed apparatus for controlling an output frequency of a laser are neither disclosed nor suggested in any piece of available prior art, and therefore are neither anticipated nor obvious over the prior art of record.

The following is an examiner's statement of reasons for allowance: claim 28 has been allowed because the available prior art fail to teach a apparatus for controlling an output frequency of a laser structure including the specific structure limitation of a *means for passing optical energy from an output of said laser to an optical component having a frequency-selective response characteristic; means for measuring response of said optical component having said frequency-selective response characteristic to said optical energy from said laser output; means for generating a dithering signal to dither said output frequency of said laser; means for controlling said laser output frequency based on said measured response as influenced by said dithering signal; and means for, if said measured response indicates said laser output frequency is outside a tracking range, sweeping a control signal until said laser output frequency is within said tracking range* in combination with the remaining limitations that comprises the claimed apparatus for controlling an output frequency of a laser are neither disclosed nor

suggested in any piece of available prior art, and therefore are neither anticipated nor obvious over the prior art of record.

Claims 3, 4, 7 – 9, 11, 14 – 15, 18 – 20, 22, 25 – 26, 29 – 31 and 33 has been found allowable due to their dependency on claims 1, 6, 12, 17, 23, and 28.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reason for Allowance".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Flores Ruiz whose telephone number is (571) 272-1940. The examiner can normally be reached on M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Sun Harvey can be reached on (571) -272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Delma R. Flores Ruiz
Examiner
Art Unit 2828

Min Sun Harvey
Supervisor Patent Examiner
Art Unit 2828

DRFR/MH
July 16, 2004